

Nutrient Requirements of Poultry: 10th Revised Edition

Committee

Kirk C. Klasing

Chair

Dr. Kirk C. Klasing is a Professor of Avian Nutrition in the Department of Animal Science at the University of California, Davis. His research interests include the interactions between nutrition and the immune system of animals, for which he has received the Poultry Science Research Award from the Poultry Science Association, the BioServ Award from the American Institute of Nutrition, and the Lilly Animal Scientist Award. He holds a B.S. degree from Purdue University and a Ph.D. from Cornell University. Dr. Klasing serves on the editorial boards of Poultry Science, Animal Biotechnology, and Journal of Nutrition. Other areas of interest include immunophysiology and disease resistance, the immunologic basis of stress, and nutrition and metabolic adaptation required by carnivorous, granivorous, and nectivorous animals. He was a member of the NRC Subcommittee on Metabolism Modifiers and Nutrient Requirements in Food Producing Animals and the Division of Earth and Life Studies' Board on Agriculture and Natural Resources. He also served as the chair of the NRC Committee on Minerals and Toxic Substances in Diets and Water for Animals, which completed its report in 2005.

Ryan N. Dilger

Member

Dr. Ryan N. Dilger is an Associate Professor in the Department of Animal Sciences at the University of Illinois, Urbana. His research includes integrating the interdisciplinary fields of animal nutrition, immunophysiology, and neuroscience, including the ability of nutrients to impact metabolic, immunologic, and developmental patterns. Dr. Dilger has received many honors including the American Society for Nutrition (ASN) Bio-Serv Award in Experimental Animal Nutrition in 2016, International Life Sciences Institute (ILSI) North America Future Leader Award in 2015, and Poultry Science Association (PSA) Hy-Line International Research Award in 2014. He received his B.S. and M.S. in Animal Science from Purdue University and Ph.D. in Animal Science from the University of Illinois, Urbana.

William Dozier

Member

Dr. William Dozier is a Professor in the College of Agriculture Poultry Science Department at Auburn University. His research efforts have focused on defining nutritional needs of broilers and the use of alternative ingredients and exogenous enzymes, which can lower feed costs. Dr. Dozier's emphasis on broiler research has been practical and application oriented, so as to benefit the broiler industry both here in the USA and abroad. Through his numerous papers on the metabolizable energy and amino acid requirements of broilers, the industry has been able to formulate diets closer to the birds requirement, improving performance and saving considerably in the cost of production. Dr. Dozier has received many honors including National Chicken Council Broiler Research Award in 2013 and the American Feed Industry Association Poultry Nutrition Research Award in 2012. He received his B.S. in Animal and Dairy Science from Auburn University, M.S. in Animal Science from the University of Kentucky-Lexington, and Ph.D. in Poultry Science from Auburn University.

Robert G. Elkin

Member

Dr. Robert G. Elkin is a Professor of Avian Nutritional Biochemistry in the Department of Animal Science at The Pennsylvania State University. His research program has spanned a number of areas, including avian amino acid nutrition and metabolism, nutritional utilization of sorghum grain, amino acid analysis of feedstuffs and physiological fluids by high-performance liquid chromatography, nutritional/pharmacological reduction of egg cholesterol content and, most recently, novel dietary approaches to enrich eggs and poultry meat with "heart healthy" very long-chain omega-3 fatty acids. Dr. Elkin's work has been recognized nationally and internationally, as evidenced by his receipt of the American Feed Industry Association Nutrition Research Award (1997) and the American Egg Board Research Award (1991) from the Poultry Science Association, a Fulbright Scholar Research Award (Austria, 1992-93), an OECD Research Fellowship (Austria, 1995), and a "Pioneer of the Mid-Atlantic Nutrition Conference" Award (2008) for support and dedication to the establishment of the Conference. Dr. Elkin served as Head of the Department of Poultry Science at Penn State from 1999 until 2012, when it was merged with the former Dairy & Animal Science Department to form the Department of Animal Science. He received his B.S. in Animal Science from The Pennsylvania State University and an M.S. in Nonruminant Nutrition and a Ph.D. in Nutritional Biochemistry from Purdue University.

Peter Ferket

Member

Dr. Peter Ferket is the William Neal Reynolds Professor - Extension Nutritionist at North Carolina State University. His extension program deals with issues related to nutrition and feeding practices of commercial poultry, with an emphasis on meat-type turkeys and broilers. Dr. Ferket's research interests complement his extension activities in applied nutrition research of commercial meat-type and egg-laying poultry and the utilization of feed additives and agricultural co-products as feed ingredients for poultry. He is internationally recognized for his research on the nutritional requirements of turkeys, perinatal nutrition, and nutritional factors that affect gut health. His teaching expertise is in vitamin and mineral metabolism, and feed formulation and simulations modeling. He is a member of the American Registry of Professional Animal Scientists, Poultry Science Association, Southern Poultry Science Society, and World's Poultry Science Association. Dr. Ferket received his B.S. in Agriculture and M.S. in Poultry Nutrition from the University of Guelph, and Ph.D. in Animal Nutrition from Iowa State University.

Gonzalo G. Mateos

Member

Dr. Gonzalo Gonzalez Mateos is a Professor of Animal Nutrition at the Universidad Politécnica de Madrid. His research areas include evaluation of quality of soybean meal and other protein sources; feed technology; processing of feeds and ingredients and biotechnology diets; design of feeds for piglet, pullets, and broiler chicks; and influence of nutrition and management on quality of eggs and meat products. Dr. Mateos was Co-Editor in Chief of Animal Feed Science and Technology until 2014 and has been a member of the Editorial Board of Poultry Science on several occasions. He is also vice-president and founder of FEDNA, the Spanish Association of Animal Nutritionists. Dr. Mateos received his B.S. in Animal Production from Universidad Politécnica de Madrid, D.V.M. from Universidad Complutense of Madrid, Ph.D. in Veterinary Science from Barcelona University and Ph.D. in Animal Nutrition from Iowa State University.

Michael E. Persia

Member

Dr. Michael E. Persia is an Assistant Professor in the Department of Animal and Poultry Sciences at Virginia Tech. His research is to increase the efficiency of poultry production through the characterization, understanding, and manipulation of bird digestive processes. The three major aims of Dr. Persia's research are to understand the effects of stress, both disease and heat, on nutrient absorption and utilization; to evaluate the efficient utilization of nutrients in poultry production to minimize environmental impacts; and to research areas within nutrition and poultry management critical to the direct needs of the commercial industry in Virginia. Dr. Persia is a member of Gamma Sigma Delta and previously served as the president of the Southern Poultry Science Society from 2012 to 2013 and is finishing a three-year term on the board of directors of the Poultry Science Association. Dr. Persia received his B.S. in Animal and Biological Sciences from Pennsylvania State University, M.S. in Poultry Nutrition from Ohio State University, and Ph.D. in Poultry Nutrition from the University of Illinois.

Sheila Purdum

Member

Dr. Sheila Purdum is a Professor of Poultry Nutrition and Chair of the Animal Science Graduate Committee at the University of Nebraska-Lincoln. Her research interests include omega egg research and patent; nutritional factors affecting calcium utilization and shell quality in laying hens; use of exogenous feed enzymes in layer and pullet feed; and laying hen behavior. She has received many honors including the Nebraska Poultry Industries Hall of Fame Award in 2008 and the Helen Cecil Leadership Award from the Poultry Science Association in 2007. Dr. Purdum received her B.S. in Animal Science and M.S. in Animal Nutrition from the University of Nebraska, and Ph.D. in Animal Nutrition/Human Nutrition from Iowa State University.

Rosemary L. Walzem

Member

Dr. Rosemary L. Walzem is a Professor in the Department of Poultry Science and a member of the Graduate Faculty of Nutrition at Texas A&M University. Her core research focus in poultry is directed towards understanding lipoprotein structure and biology and bird health. Her past research identified the key structural features that enable yolk-targeting of very low density lipoproteins (VLDL) in laying hens as well as identification of the transient high density lipoproteins (HDLr) involved in ovarian regression. She identified the similarity in metabolic features in obese breeder hens to those of women with poly cystic ovary syndrome; ultimately identifying changes in lipid metabolism that result in ovarian atresia and cardiac dysfunction in obese hens. New work focuses on dietary features that influence gut health, microbiota acquisition and the role of apolipoprotein A1 in innate immune function and its relationship to HDL functionality. As a comparative nutritionist she works across several species and has answered questions in vitamin deficiency, energy excess, protein and lipid nutrition as well as oxidative stress and phytochemical metabolism and bioactivity. Dr. Walzem received her B.S. in Clinical Dietetics, M.S. in Nutrition, and Ph.D. in Nutritional Biochemistry from the University of California, Davis. She is a registered dietitian (RD), interning at the Sutter Hospitals in Sacramento. She serves as subject expert in Nutrition for the Institute of Food Technologists (IFT) and has been their delegate to the Codex Committee on Nutrition and Foods for Special Dietary Purposes since 2004. She has served on the National Institute on Aging's Intervention Testing Program access panel since 2001 and several NIH study sections where expertise on the interface between agricultural practices and food quality is required.

Doug Korver

Member

Dr. Douglas Korver is a professor of Poultry Nutrition at the University of Alberta. He studied agriculture at the University of Saskatchewan and earned a Ph.D. from the University of California Davis. His research in feed ingredients has included a substantial effort in evaluation of feed enzymes (phytase, nonstarch polysaccharide degrading enzymes) to increase the utilization of nutrients contained within the feed. Additionally, his program has been increasingly involved in studies investigating approaches to reduce the use of prophylactic antibiotics in poultry feed. He has been a leader in the use of Quantitative Computed Tomography (QCT) to assess in vivo changes over time in broiler, laying hen and turkey bone mineralization, as well as assessing the effects of feed ingredients on bone mineralization and metabolism. Finally, his research program also investigates the effects of feed ingredients, supplements and novel ingredients on the effect of the inflammatory response on poultry productivity and metabolism.

Jason Lee

Member

Dr. Jason Lee is an Associate Professor of Poultry Science at Texas A&M University and Holder of Emanuel and Elaine Glockzin Professorship of Poultry Science. He earned a B.S in Poultry Science, M.S in Nutrition, and Ph.D. in Poultry Science, all from Texas A&M University. His research focuses on increasing nutrient utilization, reducing nutrient excretion and environmental impact, and maximizing poultry performance while balancing dietary costs. Specific areas include the use of exogenous enzymes to increased nutrient digestibility (mineral, amino acid, and energy), inclusion of probiotics and prebiotics to improve poultry health as the industry shifts toward antibiotic free production, evaluation of amino acid concentration on product yield, and investigation of mineral source and concentration to improve skeletal development in rapidly growing broilers and laying hens. Jason has served on the Foundation for Food and Agriculture Research Expert Review Panel and chaired the USDA NP 108 Panel 10: Committee on Poultry Production and Processing Review